Current Status of Atomic Spectroscopy Databases at NIST

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The NIST Atomic Spectroscopy Data Center maintains several online databases on atomic spectroscopy. These databases can be accessed via the http://physics.nist.gov/PhysRefData web page. Our main database, Atomic Spectra Database (ASD) has recently been upgraded to v. 5.0, which contains critically evaluated data for about 194,000 spectral lines and 106,000 energy levels of almost all elements in the periodic table. This new version has been expanded to include the ground states and ionization energies of all elements up to Ds (Z=110) in all ionization stages with a new Web interface for displaying them. We continue to maintain and regularly update our bibliography databases, ensuring comprehensive coverage of current literature on atomic spectra, including energy levels, spectral lines, transition probabilities, hyperfine structure, isotope shifts, Zeeman and Stark effects. We continue to maintain other popular databases such as the Handbook of Basic Atomic Spectroscopy Data, searchable atlases of spectra of Pt-Ne and Th-Ne lamps, and non-LTE plasma-kinetics code comparisons.

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